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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,322	02/27/2004	Kevin Faulkner	30014200-1217	4323
58328	7590	09/01/2011		
MARSH FISCHMANN & BREYFOGLE LLP 8055 E. Tufts Avenue, Suite 450 Denver, CO 80237				
EXAMINER				
WINDER, PATRICE L				
ART UNIT		PAPER NUMBER		
2452				
NOTIFICATION DATE		DELIVERY MODE		
09/01/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOMail@mfblaw.com

Office Action Summary**Application No.**

10/787,322

Applicant(s)

FAULKNER ET AL.

Examiner

PATRICE WINDER

Art Unit

2452

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be granted under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-3,5,6,9-13,19-29 and 61-68 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-3,5,6,9-13,19-29 and 61-68 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 13, 2010 has been entered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 5-6, 9-13, 19-29, 61-68 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 7,236,987. Although the conflicting claims are not identical, they are not patentably distinct from each other because differences are within scope of the representative claims from USPN 7,236,987.

Present application	USPN 7,236,987
1. A system for dynamically configuring a virtual volume associate with a host system, comprising: a set of storage devices, each of which includes physical block addresses for storing data associated with virtual volume; and	1. A system for providing one or more virtual volumes, comprising: a host system; a set of storage devices, each of which includes physical block addresses that stores data;

<p>a network switch system connecting the host system and the set of storage devices, and</p>	<p>a network switch system connecting the host system and the set of storage devices, and</p>
<p>including</p> <p>a set of storage processors maintaining virtual volume objects comprising first tier objects reflecting a relationship between the physical block addresses and one or more logical partitions of virtual volume data, and second tier objects reflecting a logical configuration of the virtual volume, wherein the second tier objects reflect connections between a processor and a host system and the first tier objects reflect connections between a processor and a storage device storing virtual volume data, wherein,</p>	<p>configured to define and manage a virtual volume associated with data distributed across the physical block addresses, the network switch system including: a first virtualization layer that maintains first tier objects including information reflecting a relationship between the physical block addresses and one or more logical partitions of virtual volume data, a second virtualization layer that maintains second tier objects including information reflecting a logical configuration of the virtual volume,</p> <p>a set of storage processors separated into first tier storage processors associated with the first virtualization layer and second tier storage processors associated with the second virtualization layer,</p>

	wherein each storage processor includes a virtualization state manager (VSM) that is configured to manage a local version of the virtual volume, and
the network switch uses the first and the second tier objects to dynamically update the virtual volume during runtime of the network switch system, and;	a switching fabric interconnecting the first tier storage processors and the second tier storage processors; wherein the network switch system manages the virtual volume for the host system using the first and second tier objects.
the first tier objects have logical connections to both local second tier objects associated with a shared storage processor and remote second tier objects associated with at least another storage processor.	

As per newly submitted claims 61 and 64, the additional limitations of restructuring a logical tree reflecting relationships between first tier objects and second tier objects would be covered by the broader scope of claims 1 and 6 of USPN 7,236,987.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

For other pertinent prior art see the attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICE WINDER whose telephone number is (571)272-3935. The examiner can normally be reached on Monday-Friday, 12:00 pm - 8:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu V. Nguyen can be reached on 571-272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice L Winder/
Primary Examiner, Art Unit 2452

August 27, 2011